3rd & Part Bill Reserved quantities

Quality Control Report For

Coarse and Fine Aggregate, Cement , M25 Cubes, GSB, WMM, BM, BC

3rd

RBI - Technical Services

Reg. No. 290202107599 [MICRO/SERVICES]

Road - Building - Irrigation Material Testing Laboratory

NABL Accredited Laboratory as per ISO/IEC 17025-2005

Managing Director - P. Munikrishnappa, B.E., (Civil) M.I.E. K.E.S.

ISO 9001 - 2015 Certified

Job No:RBITS/MT/BBMP-BD/2017-18/002 **Date:20.03.2018**

TEST REPORT

Client Name & address* : Executive Engineer,
Byatarayanapura Division, BBMP.

Name of Work* : Improvements to Roads, Drains and Drilling Borwells in ward no. 07 & 08 of Kodigehalli Sub-Division of Byatarayanapura Division, under P3106 Nagarathana works.

Name of the test : Sieve Analysis

Method of test : IS : 2386 Part 1 -1963 RA-2011

Type of Aggregate : Coarse Aggregates (40mm down size)

Date of Testing : 19.03.2018

Total Wt. of Aggregates taken in gms= **15000**

Is Sieve Size in mm	Weight Retained (gm)	Retained Weight in %	Cumulative Retained Weight in %	Cumulative Weight Passing in %	Spec.Limits as per IS 383-1970 (RA-2011)
63	0	0	0	100	100
40	500	3.33	3.33	96.67	95-100
20	4385	29.23	32.57	67.43	30-70
10	7550	50.33	82.90	17.10	10-35
4.75	2560	17.07	99.97	0.03	0-5

* Information is furnished by the Customer/Representative

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RBI -Technical Services
(CONSULTANT)

Assistant Engineer

Assistant Executive Engineer

Assistant Executive Engineer,
Kodigehalli Sub Division,
Yelahanka Zone, B.B.M.P.
Bangalore.

for RBI-TECHNICAL SERVICES

Proprietor

2243, 4th 'A' Cross, Hampinagar, Vijayanagar 2nd State, Bengaluru - 560 104. Tel. : 080 - 23300857
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RBI - Technical Services

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ISO 9001 - 2015 Certified

Job No:RBITS/MT/BBMP-BD/2017-18/002 **Date:20.03.2018**

TEST REPORT

Client Name & address* : Executive Engineer,
Byatarayanapura Division, BBMP.

Name of Work* : Improvements to Roads, Drains and Drilling Borwells in ward no. 07 & 08 of Kodigehalli Sub-Division of Byatarayanapura Division, under P3106 Nagarathana works.

Name of the test : Sieve Analysis

Method of test : IS : 2386 Part 1 -1963 RA-2011

Type of Aggregate : Coarse Aggregates (20mm down size)

Date of Testing : 19.03.2018

Total Wt. of Aggregates taken in gms= **10000**

Is Sieve Size in mm	Weight Retained (gm)	Retained Weight in %	Cumulative Retained Weight in %	Cumulative Weight Passing in %	Spec.Limits as per IS 383-1970 (RA-2011)
40	0	0	0	100	100
20	480	4.80	4.80	95.20	95-100
10	5895	58.95	63.75	36.25	25-55
4.75	3450	34.50	98.25	1.75	0-10

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RBI -Technical Services
(CONSULTANT)

Assistant Engineer

Assistant Executive Engineer
Assistant Executive Engineer
Kodigehalli Sub Division.
Yelahanka Zone, B.B.M.P.
Bangalore.

for RBI-TECHNICAL SERVICES

Proprietor

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ISO 9001 - 2015 Certified

Job No:RBITS/MT/BBMP-BD/2017-18/002 **Date:19.03.2018**

TEST REPORT

Client Name & address* : Executive Engineer,
Byatarayanapura Division, BBMP.

Name of Work* : Improvements to Roads, Drains and Drilling Borwells in ward no. 07 & 08 of Kodigehalli Sub-Division of Byatarayanapura Division, under P3106 Nagarathana works.

Name of the test : Sieve Analysis

Method of test : IS : 2386 Part 1 -1963 RA-2011

Type of Aggregate : Fine Aggregates (Sand)

Date of Testing : 18.03.2018

Total Wt. of Aggregates taken in gms= 500

Is Sieve Size in mm	Weight Retained (gm)	Retained Weight in %	Cumulative Retained Weight in %	Cumulative Weight Passing in %	Spec.Limits as per IS 383-1970 (RA-2011) For Zone-II
10	0	0	0	100	100
4.75	23.5	4.70	4.70	95.3	90-100
2.36	56.5	11.30	16.00	84.0	75-100
1.18	125.5	25.10	41.10	58.9	55-90
0.6	83.5	16.70	57.80	42.2	35-59
0.3	102.2	20.44	78.24	21.8	8-30
0.15	87.5	17.50	95.74	4.3	0-20

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RBI -Technical Services
(CONSULTANT)

Assistant Engineer

Assistant Executive Engineer

Assistant Executive Engineer,
Kodigehalli Sub Division,
Yelahanka Zone, B.B.M.P.
Bangalore.

For RBI-TECHNICAL SERVICES

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ISO 9001 - 2015 Certified

Job No:RBITS/MT/BBMP-BD/2017-18/002 **Date:19.03.2018**

TEST REPORT

Client Name & address*	:	Executive Engineer, Byatarayanapura Division, BBMP.
Name of Work*	:	Improvements to Roads, Drains and Drilling Borwells in ward no. 07 & 08 of Kodigehalli Sub-Division of Byatarayanapura Division, under P3106 Nagarathana works.
Method of test	:	IS-4031 (Part -5), (Part - 4), (Part - 6) 1988 (RA-2009)
Type of Sample	:	Cement, OPC 43 grade
Date of Testing	:	15.03.2018 to 18.03.2018

PHYSICAL PROPERTIES

Sl.No	Name of the test	Test Results	Requirements as per IS: 8112-1989
1	Consistancy	30.00%	Not Mentioned
2	Initial Setting Time	130 minutes	Not Less than 30 Minutes
3	Final Setting Time	380 minutes	Not More than 600 Minutes
4	Compressive Strength		
	3 Days (72 hrs)	25.0 Mpa	Shall not be less than 23.0 Mpa

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RBI -Technical Services
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Assistant Engineer

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Assistant Executive Engineer
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Bangalore.

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Managing Director - P. Munikrishnappa, B.E., (Civil) M.I.E. K.E.S.

Lab ID: :RBITC/MT/BD/2017-18 **ISO 9001 - 2015 Certified** Date: 26.03.2018

TEST REPORT ON REINFORCEMENT STEEL

Client : **Executive Engineer, Byatarayanapura Division, BBMP.**

Name of the work : Improvements to Roads, Drains and Drilling Borwells in ward no. 07 & 08 of Kodigehalli Sub-Division of Byatarayanapura Division, under P3106 Nagarathana works.

Date of Test : 25.03.2018

Technical Reference : IS: 1786-2008

Sl. No	Nominal size (dia) (mm)	Mass per metre (Kg/mtr)	TENSILE STRENGTH			Bend Test	Rebend Test
			0.20% proof stress/Yield stress N/mm²	Tensile strength (Ultimate stress) N/mm²	Elongation percent gauge length		
1	10	0.618	513	548	15.50	O.K	O.K
2	12	0.890	516	562	15.00	O.K	O.K
3	16	1.582	517	568	16.00	O.K	O.K

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For RBI-TECHNICAL SERVICES

Proprietor

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Managing Director - P. Munikrishnappa, B.E., (Civil) M.I.E. K.E.S.

ISO 9001 - 2015 Certified

Job No:RBITS/MT/BD/2017-18/002 **Date:** 24.04.2018

TEST REPORT

***Client Name & address**	:	Executive Engineer, Byatarayanapura Division, BBMP.
Name of Work*	:	Improvements to Roads, Drains and Drilling Borwells in ward no. 07 & 08 of Kodigehalli Sub-Division of Byatarayanapura Division, under P3106 Nagarathana works.
Name of Test	:	Compressive strength of concrete cubes
Size of cubes	:	150mmx150mmx150mm
Cross Sectional Area	:	22500 mm^2
No. of CubesTested	:	3 No.s
Technical Reference	:	IS: 516-1959 (Reaffirmed 2008)
***Grade of Concrete**	:	M25

Sl.No.	* Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)	Average Compressive strength (N/mm^2)
1	27.03.2018	24.04.2018	8.050	580.0	25.78	26.30
2	27.03.2018	24.04.2018	8.150	595.0	26.44	
3	27.03.2018	24.04.2018	8.030	600.0	26.67	

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RBI -Technical Services
(CONSULTANT)

Assistant Engineer

Assistant Executive Engineer

Assistant Executive Engineer,
Kodigehalli Sub Division
Yelahanka Zone, B.B.M.P.
Bangalore

for RBI-TECHNICAL SERVICES

Proprietor

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ISO 9001 - 2015 Certified

Job No:RBITS/MT/BBMP-BD/Package-02/2017-18/002 Date:10.04.2018

RBI- Technical Services

GRADATION FOR GSB
MORTH TABLE-400-11

Name of the Work	Improvements to Roads, Drains and Drilling Borwells in ward no. 07 & 08 of Kodigehalli Sub-Division of Byatarayanapura Division, under P3106 Nagarathana works.
Client	Executive Engineer, Byatarayanapura Division, BBMP.
Source of Sample	On site
Date of Testing	09.04.2018
Material	Close - Graded Granular Sub-Base, Grading II

Oven dry Wt.(gms) **10000**

Is Sieve Size in mm	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	MORTH Specifications Table 400-1.
53	0	0	0	100	100
26.5	455	4.55	4.55	95.45	70-100
9.5	3155	3159.55	31.6	68.4	50-80
4.75	2150	5309.55	53.1	46.9	40-65
2.36	1275	6584.55	65.8	34.2	30-50
0.425	1285	7869.55	78.7	21.3	15-25
0.075	1550	9419.55	94.2	5.8	3-10

Note: 1) The results indicated above are based on the tests carried out on the samples received in the laboratory.

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RBI -Technical Services
(CONSULTANT)
RBI-TECHNICAL SERVICES
Proprietor

Assistant Engineer

Assistant Executive Engineer
Kodigehalli Sub Division
Yelahanka Zone, B.B.M.P
Bangalore.

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Job No:RBITS/MT/BBMP-BD/Package-02/2017-18/002 Date:10.04.2018

RBI- Technical Services

GRADATION FOR GSB
MORTH TABLE-400-11

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Client	Executive Engineer, Byatarayanapura Division, BBMP.
Source of Sample	On site
Date of Testing	09.04.2018
Material	Close - Graded Granular Sub-Base, Grading II

Oven dry Wt.(gms) **10000**

Is Sieve Size in mm	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	MORTH Specifications Table 400-1.
53	0	0	0	100	100
26.5	465	4.65	4.65	95.35	70-100
9.5	3165	3169.65	31.7	68.3	50-80
4.75	2165	5334.65	53.3	46.7	40-65
2.36	1185	6519.65	65.2	34.8	30-50
0.425	1265	7784.65	77.8	22.2	15-25
0.075	1545	9329.65	93.3	6.7	3-10

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RBI -Technical Services
(CONSULTANT)

RBI-TECHNICAL SERVICES

Proprietor

Assistant Engineer

Assistant Executive Engineer
Kodigehalli Sub Division
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RBI- Technical Services

GRADATION FOR GSB
MORTH TABLE-400-11

Name of the Work	Improvements to Roads, Drains and Drilling Borwells in ward no. 07 & 08 of Kodigehalli Sub-Division of Byatarayanapura Division, under P3106 Nagarathana works.
Client	Executive Engineer, Byatarayanapura Division, BBMP.
Source of Sample	On site
Date of Testing	09.04.2018
Material	Close - Graded Granular Sub-Base, Grading II

Oven dry Wt.(gms) **10000**

Is Sieve Size in mm	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	MORTH Specifications Table 400-1.
53	0	0	0	100	100
26.5	480	4.8	4.8	95.2	70-100
9.5	3175	3179.8	31.8	68.2	50-80
4.75	2165	5344.8	53.4	46.6	40-65
2.36	1165	6509.8	65.1	34.9	30-50
0.425	1350	7859.8	78.6	21.4	15-25
0.075	1585	9444.8	94.4	5.6	3-10

Note: 1) The results indicated above are based on the tests carried out on the samples received in the laboratory.

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(CONSULTANT)

RBI TECHNICAL SERVICES

Proprietor

Assistant Engineer

Assistant Executive Engineer

Assistant Executive Engineer
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RBI- Technical Services

GRADATION FOR GSB
MORTH TABLE-400-11

Name of the Work	Improvements to Roads, Drains and Drilling Borwells in ward no. 07 & 08 of Kodigehalli Sub-Division of Byatarayanapura Division, under P3106 Nagarathana works.
Client	Executive Engineer, Byatarayanapura Division, BBMP.
Source of Sample	On site
Date of Testing	09.04.2018
Material	Close - Graded Granular Sub-Base, Grading II

Oven dry Wt.(gms) **10000**

Is Sieve Size in mm	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	MORTH Specifications Table 400-1.
53	0	0	0	100	100
26.5	495	4.95	4.95	95.05	70-100
9.5	3150	3154.95	31.5	68.5	50-80
4.75	2185	5339.95	53.4	46.6	40-65
2.36	1175	6514.95	65.1	34.9	30-50
0.425	1365	7879.95	78.8	21.2	15-25
0.075	1545	9424.95	94.2	5.8	3-10

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RBI TECHNICAL SERVICES

Proprietor

Assistant Engineer

Assistant Executive Engineer

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RBI- Technical Services

ATTERBERG LIMITS TEST FOR GSB
MORTH TABLE-400-13

Client	:	**Executive Engineer, Byatarayanapura Division, BBMP.**
Name of Work	:	Improvements to Roads, Drains and Drilling Borwells in ward no. 07 & 08 of Kodigehalli Sub-Division of Byatarayanapura Division, under P3106 Nagarathana works.
Source of Sample	:	Hot Mix Plant
Date of Sample Testing	:	**09.04.2018 to 10.04.2018**
Material	:	**Close - Graded Granular Sub-Base, Grading II**

Sl. No.	Name of Test	Test Method	Test Results
1	Liquid Limit	IS : 2720-1985 Part 5 RA : 2010	21.00%
3	Plasticity index	IS : 2720-1985 Part 5 RA : 2010	NP

Remarks:

1 Results relate only to the sample (s) under test in as received condition and applicable parameter (s).

2 The sample will be stored upto one month from the date of issue of test report unless otherwise specified.

RBI -Technical Services
(CONSULTANT)

for RBI-TECHNICAL SERVICES

Proprietor

Assistant Engineer

Assistant Executive Engineer

Assistant Executive Engineer
Kodigehalli Sub Division
Yelahanka Zone, B.B.M.P
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ISO 9001 - 2015 Certified

Job No:RBITS/MT/BBMP-BD/2017-18/002 Date:10.04.2018

RBI- Technical Services

ATTERBERG LIMITS TEST FOR GSB
MORTH TABLE-400-13

Client	:	**Executive Engineer, Byatarayanapura Division, BBMP.**
Name of Work	:	Improvements to Roads, Drains and Drilling Borwells in ward no. 07 & 08 of Kodigehalli Sub-Division of Byatarayanapura Division, under P3106 Nagarathana works.
Source of Sample	:	Hot Mix Plant
Date of Sample Testing	:	**09.04.2018 to 10.04.2018**
Material	:	**Close - Graded Granular Sub-Base, Grading II**

Sl. No.	Name of Test	Test Method	Test Results
1	Liquid Limit	IS : 2720-1985 Part 5 RA : 2010	22.50%
3	Plasticity index	IS : 2720-1985 Part 5 RA : 2010	NP

Remarks:

1 Results relate only to the sample (s) under test in as received condition and applicable parameter (s).

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(CONSULTANT)

Assistant Engineer

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Yelahanka Zone, B.B.M.P.
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Job No:RBITS/MT/BBMP-BD/2017-18/002 **Date:10.04.2018**

RBI- Technical Services

ATTERBERG LIMITS TEST FOR GSB
MORTH TABLE-400-13

Client	:	**Executive Engineer, Byatarayanapura Division, BBMP.**
Name of Work	:	Improvements to Roads, Drains and Drilling Borwells in ward no. 07 & 08 of Kodigehalli Sub-Division of Byatarayanapura Division, under P3106 Nagarathana works.
Source of Sample	:	Hot Mix Plant
Date of Sample Testing	:	**09.04.2018 to 10.04.2018**
Material	:	**Close - Graded Granular Sub-Base, Grading II**

Sl. No.	Name of Test	Test Method	Test Results
1	Liquid Limit	IS : 2720-1985 Part 5 RA : 2010	21.50%
3	Plasticity index	IS : 2720-1985 Part 5 RA : 2010	NP

Remarks:

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RBI - Technical Services

Reg. No. 290202107599 [MICRO/SERVICES]

Road - Building - Irrigation Material Testing Laboratory

NABL Accredited Laboratory as per ISO/IEC 17025-2005

Managing Director - P. Munikrishnappa, B.E., (Civil) M.I.E. K.E.S.

ISO 9001 - 2015 Certified

Job No:RBITS/MT/BBMP-BD/2017-18/002 **Date:10.04.2018**

RBI- Technical Services

ATTERBERG LIMITS TEST FOR GSB
MORTH TABLE-400-13

Client	:	**Executive Engineer, Byatarayanapura Division, BBMP.**
Name of Work	:	Improvements to Roads, Drains and Drilling Borwells in ward no. 07 & 08 of Kodigehalli Sub-Division of Byatarayanapura Division, under P3106 Nagarathana works.
Source of Sample	:	Hot Mix Plant
Date of Sample Testing	:	**09.04.2018 to 10.04.2018**
Material	:	**Close - Graded Granular Sub-Base, Grading II**

Sl. No.	Name of Test	Test Method	Test Results
1	Liquid Limit	IS : 2720-1985 Part 5 RA : 2010	23.50%
3	Plasticity index	IS : 2720-1985 Part 5 RA : 2010	NP

Remarks:

1 Results relate only to the sample (s) under test in as received condition and applicable parameter (s).

2 The sample will be stored upto one month from the date of issue of test report unless otherwise specified.

RBI -Technical Services
(CONSULTANT)

RBI-TECHNICAL SERVICES

Proprietor

Assistant Engineer

Assistant Executive Engineer,
Kodigehalli Sub Division
Yelahanka Zone, B.B.M.P.
Bangalore.

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Managing Director - P. Munikrishnappa, B.E., (Civil) M.I.E. K.E.S.

ISO 9001 - 2015 Certified

Job No:RBITS/MT/BBMP-BD/2017-18/002 **Date:16.04.2018**

RBI- Technical Services

GRADATION FOR WMM

MORTH TABLE-400-11

Name of the Work	**Improvements to Roads, Drains and Drilling Borwells in ward no. 07 & 08 of Kodigehalli Sub-Division of Byatarayanapura Division, under P3106 Nagarathana works.**
Client	**Executive Engineer, Byatarayanapura Division, BBMP.**
Source of Sample	**Hot Mix Plant**
Date of Testing	**15.04.2018**
Material	**Wet Mix Macadam**

Oven dry Wt.(gms) **10000**

Is Sieve Size in mm	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Spec.Limits
53	0	0	0	100	100
45	440	4.4	4.4	95.60	95-100
22.4	3250	32.5	36.9	63.1	60-80
11.2	1874	18.74	55.6	44.4	40-60
4.75	1525	15.25	70.9	29.1	25-40
2.36	1260	12.6	83.5	16.5	15-30
0.600	705	7.1	90.5	9.5	8-22
0.075	650	6.5	97.0	3.0	0-8

Note: 1) The results indicated above are based on the tests carried out on the samples received in the laboratory.

2)Any Query regarding the report must be reported immediately.

RBI -Technical Services
(CONSULTANT)

Assistant Engineer

Assistant Executive Engineer

Assistant Executive Engineer
Kodigehalli Sub Division
Yelahanka Zone, B.B.M.P
Bangalore.

for RBI-TECHNICAL SERVICES

Proprietor

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ISO 9001 - 2015 Certified

Job No:RBITS/MT/BBMP-BD/2017-18/002 **Date:16.04.2018**

RBI- Technical Services

GRADATION FOR WMM

MORTH TABLE-400-11

Name of the Work	**Improvements to Roads, Drains and Drilling Borwells in ward no. 07 & 08 of Kodigehalli Sub-Division of Byatarayanapura Division, under P3106 Nagarathana works.**
Client	**Executive Engineer, Byatarayanapura Division, BBMP.**
Source of Sample	**Hot Mix Plant**
Date of Testing	**15.04.2018**
Material	**Wet Mix Macadam**

Oven dry Wt.(gms) **10000**

Is Sieve Size in mm	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Spec.Limits
53	0	0	0	100	100
45	435	4.35	4.35	95.65	95-100
22.4	3195	31.95	36.3	63.7	60-80
11.2	1870	18.7	55.0	45.0	40-60
4.75	1532	15.32	70.3	29.7	25-40
2.36	1265	12.65	83.0	17.0	15-30
0.600	750	7.5	90.5	9.5	8-22
0.075	645	6.5	96.9	3.1	0-8

Note: 1) The results indicated above are based on the tests carried out on the samples received in the laboratory.

2)Any Query regarding the report must be reported immediately.

RBI -Technical Services
(CONSULTANT)

Assistant Engineer

Assistant Executive Engineer

Assistant Executive Engineer
Kodigehalli Sub Division
Yelahanka Zone, B.B.M.P.
Bangalore.

For RBI-TECHNICAL SERVICES

Proprietor

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ISO 9001 - 2015 Certified

Job No:RBITS/MT/BBMP-BD/2017-18/002 **Date:16.04.2018**

RBI- Technical Services

AGGREGATE IMPACT VALUE

(IS : 2386 Part - 4)

Client	**Executive Engineer, Byatarayanapura Division, BBMP.**
Name of Work	**Improvements to Roads, Drains and Drilling Borwells in ward no. 07 & 08 of Kodigehalli Sub-Division of Byatarayanapura Division, under P3106 Nagarathana works.**
Source of Sample	**Hot Mix Plant**
Date of Testing	**15.04.2018**
Material	**Wet Mix Macadam**

Description		Trails		
		1	2	3
Wt.Of stone pieces(dry) passing IS Sieve 12.5mm but retained in IS Sieve 10mm(gm)	(Wa)	322.0	323.0	323.0
Wt.Of the fraction retained in IS Sieve 2.36mm after the impact test(gm)	(Wb)	263.5	263.8	263.4
Wt.Of the fraction Passed in IS Sieve 2.36mm after the impact test(gm)	(Wc)	58.50	58.60	58.80
Aggregate Impact value (%)	(Wc/Wa)100	18.2	18.1	18.2
Average Aggregate Impact value (%)			**18.2**	
Specified Aggregate Impact value (%)			**30.0**	

RBI -Technical Services (CONSULTANT)

Assistant Engineer

Assistant Executive Engineer

Assistant Executive Engineer,
Kodigehalli Sub Division,
Yelahanka Zone, B.B.M.P.
Bangalore.

For RBI-TECHNICAL SERVICES

Proprietor

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RBI - Technical Services

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Managing Director - P. Munikrishnappa, B.E., (Civil) M.I.E. K.E.S.

ISO 9001 - 2015 Certified

Job No:RBITS/MT/BBMP-BD/2017-18/002 **Date:16.04.2018**

RBI- Technical Services

AGGREGATE IMPACT VALUE

(IS : 2386 Part - 4)

Client	**Executive Engineer, Byatarayanapura Division, BBMP.**
Name of Work	**Improvements to Roads, Drains and Drilling Borwells in ward no. 07 & 08 of Kodigehalli Sub-Division of Byatarayanapura Division, under P3106 Nagarathana works.**
Source of Sample	**Hot Mix Plant**
Date of Testing	**15.04.2018**
Material	**Wet Mix Macadam**

Description		Trails		
		1	2	3
Wt.Of stone pieces(dry) passing IS Sieve 12.5mm but retained in IS Sieve 10mm(gm)	(Wa)	323.0	323.0	323.0
Wt.Of the fraction retained in IS Sieve 2.36mm after the impact test(gm)	(Wb)	263.6	263.9	263.5
Wt.Of the fraction Passed in IS Sieve 2.36mm after the impact test(gm)	(Wc)	58.60	58.70	58.70
Aggregate Impact value (%)	(Wc/Wa)100	18.1	18.2	18.2
Average Aggregate Impact value (%)			**18.2**	
Specified Aggregate Impact value (%)			**30.0**	

RBI -Technical Services (CONSULTANT)

Assistant Engineer

Assistant Executive Engineer

Assistant Executive Engineer
Kodigehalli Sub-Division
Yelahanka Zone, B.B.M.P.
Bangalore.

For RBI-TECHNICAL SERVICES

Proprietor

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Job No:RBITS/MT/BBMP-BD/2017-18/002

Date:15.04.2018

Aggregate Shape Test
IS: 2386 Part I

Client	**Executive Engineer, Byatarayanapura Division, BBMP.**
Name of the Work	Improvements to Roads, Drains and Drilling Borwells in ward no. 07 & 08 of Kodigehalli Sub-Division of Byatarayanapura Division, under P3106 Nagarathana works.
Type of Mix	**WMM**
Source of Sample	Hot Mix Plant
Date of Testing	**14.04.2018**

Size of Aggregates		Weight of Fraction consisting of atleast 200 pieces, g		Thickness guage size, mm	Weight of aggregate in each fraction passing thickness guage, g		Length guage size, mm	Weight of aggregate in each fraction retained on length guage, g	
Passing through IS sieve, mm	Retained on IS sieve, mm								
63	50	W_1	0	23.9	w_1	0	--	x_1	0
50	40	W_2	0	27	w_2	0	81	x_2	0
40	25	W_3	0	19.5	w_3	0	58	x_3	0
31.5	25	W_4	0	16.95	w_4	0	--	x_4	0
25	20	W_5	2250	13.5	w_5	155	40.5	x_5	155
20	16	W_6	1850	10.8	w_6	140	32.4	x_6	125
16	12.5	W_7	1050	8.55	w_7	120	25.5	x_7	115
12.5	10	W_8	750	6.75	w_8	105	20.2	x_8	90
10	6.3	W_9	100	4.89	w_9	5	14.7	x_9	15

Flakiness Index 8.75%

Elongation Index 8.33%

Combined Flakiness & Elongation Index 17.08%

Comments:

→ Maximum allowable Combined Flakiness and Elongation Index for Bituminous Concrete is 30%

RBI -Technical Services
(CONSULTANT)

for RBI-TECHNICAL SERVICES

Proprietor

NDP
Assistant Engineer

Assistant Executive Engineer

Assistant Executive Engineer
Kodigehalli Sub Division,
Yelahanka Zone, B.B.M.P
Bangalore.

Date:15.04.2018

Job No:RBITS/MT/BBMP-BD/2017-18/002

Aggregate Shape Test
IS: 2386 Part I

Client	**Executive Engineer, Byatarayanapura Division, BBMP.**
Name of the Work	Improvements to Roads, Drains and Drilling Borwells in ward no. 07 & 08 of Kodigehalli Sub-Division of Byatarayanapura Division, under P3106 Nagarathana works.
Type of Mix	**WMM**
Source of Sample	Hot Mix Plant
Date of Testing	**14.04.2018**

Size of Aggregates		Weight of Fraction consisting of atleast 200 pieces, g		Thickness guage size, mm	Weight of aggregate in each fraction passing thickness guage, g		Length guage size, mm	Weight of aggregate in each fraction retained on length guage, g	
Passing through IS sieve, mm	Retained on IS sieve, mm								
63	50	W_1	0	23.9	w_1	0	--	x_1	0
50	40	W_2	0	27	w_2	0	81	x_2	0
40	25	W_3	0	19.5	w_3	0	58	x_3	0
31.5	25	W_4	0	16.95	w_4	0	--	x_4	0
25	20	W_5	2150	13.5	w_5	165	40.5	x_5	155
20	16	W_6	1750	10.8	w_6	145	32.4	x_6	125
16	12.5	W_7	1150	8.55	w_7	125	25.5	x_7	115
12.5	10	W_8	765	6.75	w_8	100	20.2	x_8	90
10	6.3	W_9	50	4.89	w_9	5	14.7	x_9	15

Flakiness Index 9.21%

Elongation Index 8.53%

Combined Flakiness & Elongation Index **17.73%**

Comments:

→ Maximum allowable Combined Flakiness and Elongation Index for Bituminous Concrete is 30%

NDD
AE (17)

Assistant Engineer

Assistant Executive Engineer

Assistant Executive Engineer
Kodigehalli Sub Division,
Yelahanka Zone, B.B.M.P.
Banga...

RBI -Technical Services
(CONSULTANT)

For RBI-TECHNICAL SERVICES

Proprietor

RBI - Technical Services

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ISO 9001 - 2015 Certified

Job No:RBITS/MT/BBMP-BD/2017-18/002

Date:16.04.2018

RBI- Technical Services

ATTERBERG LIMITS TEST FOR WMM
MORTH TABLE-400-13

Client	:	**Executive Engineer, Byatarayanapura Division, BBMP.**
Name of Work	:	Improvements to Roads, Drains and Drilling Borwells in ward no. 07 & 08 of Kodigehalli Sub-Division of Byatarayanapura Division, under P3106 Nagarathana works.
Source of Sample	:	Hot Mix Plant
Date of Sample Testing	:	**14.04.2018 to 15.04.2018**
Material	:	**WMM**

Sl. No.	Name of Test	Test Method	Test Results
1	Liquid Limit	IS : 2720-1985 Part 5 RA : 2010	22.50%
3	Plasticity index	IS : 2720-1985 Part 5 RA : 2010	NP

Remarks:

1 Results relate only to the sample (s) under test in as received condition and applicable parameter (s).

2 The sample will be stored upto one month from the date of issue of test report unless otherwise specified.

RBI -Technical Services
(CONSULTANT)

Proprietor

Assistant Engineer

Assistant Executive Engineer

Assistant Executive Engineer
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ISO 9001 - 2015 Certified

Job No:RBITS/MT/BBMP-BD/2017-18/002 **Date:16.04.2018**

RBI- Technical Services

ATTERBERG LIMITS TEST FOR WMM
MORTH TABLE-400-13

Client	:	**Executive Engineer, Byatarayanapura Division, BBMP.**
Name of Work	:	Improvements to Roads, Drains and Drilling Borwells in ward no. 07 & 08 of Kodigehalli Sub-Division of Byatarayanapura Division, under P3106 Nagarathana works.
Source of Sample	:	Hot Mix Plant
Date of Sample Testing	:	**14.04.2018 to 15.04.2018**
Material	:	**WMM**

Sl. No.	Name of Test	Test Method	Test Results
1	Liquid Limit	IS : 2720-1985 Part 5 RA : 2010	21.00%
3	Plasticity index	IS : 2720-1985 Part 5 RA : 2010	NP

Remarks:

1 Results relate only to the sample (s) under test in as received condition and applicable parameter (s).

2 The sample will be stored upto one month from the date of issue of test report unless otherwise specified.

RBI -Technical Services
(CONSULTANT)

RBI-TECHNICAL SERVICES

Proprietor

Assistant Engineer

Assistant Executive Engineer

Assistant Executive Engineer.
Kodigehalli Sub Division.
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ISO 9001 - 2015 Certified

Job No:RBITS/MT/BBMP-BD/2017-18/002 Date:26.04.2018

RBI- Technical Services

Aggregate Gradation Test

IS : 2386 Part I

Client	**Executive Engineer, Byatarayanapura Division, BBMP.**
Name of the Work	Improvements to Roads, Drains and Drilling Borwells in ward no. 07 & 08 of Kodigehalli Sub-Division of Byatarayanapura Division, under P3106 Nagarathana works.
Type of Mix	**Bituminous Macadam**
Source of Sample	Hot Mix Plant
Date of Testing	**25.04.2018**

Total Weight of Sample: **5000**

SIEVE SIZE, mm	Weight Retained, gm	Cummulative Weight retained	Cummulative % Retained	% Passing	JOBMIX Gradation as per MORTH	Remarks
26.5	0	0	0	100	100	Bituminous Macadam Grade-II specification as per MORTH
19	485	9.70	9.70	90.30	90 - 100	
13.2	1650	33.00	42.70	57.30	56 - 88	
4.75	1270	25.40	68.10	31.90	16 - 36	
2.36	755	15.10	83.20	16.80	4-19	
0.3	535	10.70	93.90	6.10	2-10	
0.075	200	4.00	97.90	2.10	0-8	

Note: 1) The results indicated above are based on the tests carried out on the samples received in the laboratory.
2)Any Query regarding the report must be reported immediately.

RBI -Technical Services
(CONSULTANT)

Assistant Engineer

Assistant Executive Engineer
Assistant Executive Engineer,
Kodigehalli Sub Division
Yelahanka Zone

For RBI-TECHNICAL SERVICES

Proprietor

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ISO 9001 - 2015 Certified

Job No:RBITS/MT/BBMP-BD/Package-02/2017-18/001 Date:26.04.2018

RBI- Technical Services

Aggregate Impact Value

IS: 2386 Part IV

Client	**Executive Engineer, Byatarayanapura Division, BBMP.**
Name of the Work	Improvements to Roads, Drains and Drilling Borwells in ward no. 07 & 08 of Kodigehalli Sub-Division of Byatarayanapura Division, under P3106 Nagarathana works.
Type of Mix	**Bituminous Macadam**
Source of Sample	Hot Mix Plant
Date of Testing	**25.04.2018**

Sl No.	Details	Trial No.		Average
		1	2	
1	Total weight of aggregate sample filling the cylindrical measure = W_1 g	384	383	
2	Weight of aggregate passing 2.36 mm sieve after the test = W_2 g	85.6	85.7	
3	Weight of aggregate retained 2.36 mm sieve after the test = W_3 g	297.5	296.9	
4	Aggregate Impact value = percent fines 100* (W_2/W_1) percent	22.29	22.38	**22.33**

Comments:

→ Maximum allowable Aggregate Impact value for Bituminous Macadam is 30%

Note: 1) The results indicated above are based on the tests carried out on the samples received in the laboratory.

2)Any Query regarding the report must be reported immediately.

RBI -Technical Services (CONSULTANTS)

For RBI TECHNICAL SERVICES

Proprietor

NDP

Assistant Engineer

Assistant Executive Engineer

Assistant Executive Engineer
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Job No:RBITS/MT/BBMP-BD/2017-18/002

Date:26.04.2018

Aggregate Shape Test

IS: 2386 Part I

Client	**Executive Engineer, Byatarayanapura Division, BBMP.**
Name of the Work	Improvements to Roads, Drains and Drilling Borwells in ward no. 07 & 08 of Kodigehalli Sub-Division of Byatarayanapura Division, under P3106 Nagarathana works.
Type of Mix	**Bituminous Macadam**
Source of Sample	Hot Mix Plant
Date of Testing	**25.04.2018**

Size of Aggregates		Weight of Fraction consisting of atleast 200 pieces, g		Thickness guage size, mm	Weight of aggregate in each fraction passing thickness guage, g		Length guage size, mm	Weight of aggregate in each fraction retained on length guage, g	
Passing through IS sieve, mm	Retained on IS sieve, mm								
63	50	W_1	0	23.9	w_1	0	--	x_1	0
50	40	W_2	0	27	w_2	0	81	x_2	0
40	25	W_3	0	19.5	w_3	0	58	x_3	0
31.5	25	W_4	0	16.95	w_4	0	--	x_4	0
25	20	W_5	0	13.5	w_5	0	40.5	x_5	0
20	16	W_6	2450	10.8	w_6	170	32.4	x_6	165
16	12.5	W_7	1650	8.55	w_7	150	25.5	x_7	105
12.5	10	W_8	950	6.75	w_8	100	20.2	x_8	105
10	6.3	W_9	140	4.89	w_9	10	14.7	x_9	10

Flakiness Index 8.29%

Elongation Index 7.42%

Combined Flakiness & Elongation Index 15.70%

Comments:

→ Maximum allowable Combined Flakiness and Elongation Index for Bituminous Macadam is 30%

NDP

Assistant Engineer

Assistant Executive Engineer

RBI Technical Services
(CONSULTANT)

RBI-TECHNICAL SERVICES

Proprietor

Assistant Executive Engineer,
Kodigehalli Sub Division,
Yelahanka Zone, B.B.M.P.
Bangalore

RBI - Technical Services

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Managing Director - P. Munikrishnappa, B.E., (Civil) M.I.E. K.E.S.

ISO 9001 - 2015 Certified

Job No:RBITS/MT/BBMP-BD/2017-18/002 **Date:26.04.2018**

TEST REPORT

Client	:	**Executive Engineer,** **Byatarayanapura Division, BBMP.**
Name of the work	:	Improvements to Roads, Drains and Drilling Borwells in ward no. 07 & 08 of Kodigehalli Sub-Division of Byatarayanapura Division, under P3106 Nagarathana works.
Source of Sample	:	Hot Mix Plant
Date of Testing	:	25.04.2018

The results of the tests conducted on the **Bitumen VG-30** sample using for Bituminous Macadam collected from the contractor's plant are as follows:

Sl.No	Description	Test Result	Requirement as per IS:73:2013 for Paving Bitumen
1	Penetration at 25^0c, 1/10 mm,100g.5s	56	Min, 45
2	Softening point, ^{0}c	50	Min. 47
3	Flash Point, ^{0}c	245	Min. 220
4	Ductility at 25^0c, cm Min	100	40

⇒ *The results indicated above are based on the tests carried out on the samples received in the laboratory.*

⇒ *Any Query regarding the report must be reported immediately.*

For RBI-TECHNICAL SERVICES

Proprietor

RBI -Technical Services

Assistant Engineer

Assistant Executive Engineer

Assistant Executive Engineer
Kodigehalli Sub Division,
Yelahanka Zone, B.B.M.P.,
Bangalore.

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RBI - Technical Services

Reg. No. 290202107599 [MICRO/SERVICES]

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Managing Director - P. Munikrishnappa, B.E. (Civil) M.I.E. K.E.S.

ISO 9001 - 2015 Certified

Job No:RBITS/MT/BBMP-BD/2017-18/002 Date:30.04.2018

RBI- Technical Services

Aggregate Gradation Test

IS : 2386 Part I

Client	**Executive Engineer, Byatarayanapura Division, BBMP.**
Name of the Work	Improvements to Roads, Drains and Drilling Borwells in ward no. 07 & 08 of Kodigehalli Sub-Division of Byatarayanapura Division, under P3106 Nagarathana works.
Type of Mix	**Bituminous Concrete**
Source of Sample	Hot Mix Plant
Date of Testing	**29.04.2018**

Total Weight of Sample: **5000** gms

SIEVE SIZE, mm	Weight Retained, gm	Cummulative Weight retained	Cummulative % Retained	% Passing	JOBMIX Gradation as per MORTH	Remarks
19	0	0	0	100	100	Gradation satisfies Bituminous concrete Grading-II specification as per MORTH
13.2	380	7.60	7.60	92.40	79 - 100	
9.5	575	11.50	19.10	80.90	70 - 88	
4.75	800	16.00	35.10	64.90	53 - 71	
2.36	615	12.30	47.40	52.60	42 - 58	
1.18	525	10.50	57.90	42.10	34 - 48	
0.600	335	6.70	64.60	35.40	26 - 38	
0.300	585	11.70	76.30	23.70	18 - 28	
0.150	475	9.50	85.80	14.20	12 - 20	
0.075	370	7.40	93.20	6.80	4 - 10	

Note: 1) The results indicated above are based on the tests carried out on the samples received in the laboratory.
2)Any Query regarding the report must be reported immediately.

RBI -Technical Services
(CONSULTANT)

Assistant Engineer

Assistant Executive Engineer

Assistant Executive Engine
Kodigehalli Sub Division
Yelahanka Zone, B.B.M.P
Bangalore.

for RBI- TECHNICAL SERVICES

2243, 4th 'A' Cross, Hampinagar, Vijayanagar 2nd State, Bengaluru - 560 104. Tel. : 080 - 23300857
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RBI - Technical Services

Reg. No. 290202107599 [MICRO/SERVICES]

Road - Building - Irrigation Material Testing Laboratory

NABL Accredited Laboratory as per ISO/IEC 17025-2005

Managing Director - P. Munikrishnappa, B.E., (Civil) M.I.E. K.E.S.

ISO 9001 - 2015 Certified

Job No:RBITS/MT/BBMP-BD/2017-18/002 Date:30.04.2018

RBI- Technical Services

Aggregate Impact Value

IS: 2386 Part IV

Client	**Executive Engineer, Byatarayanapura Division, BBMP.**
Name of the Work	Improvements to Roads, Drains and Drilling Borwells in ward no. 07 & 08 of Kodigehalli Sub-Division of Byatarayanapura Division, under P3106 Nagarathana works.
Type of Mix	**Bituminous Concrete**
Source of Sample	Hot Mix Plant
Date of Testing	**29.04.2018**

Sl No.	Details	Trial No.		Average
		1	2	
1	Total weight of aggregate sample filling the cylindrical measure = W_1 g	381	381	
2	Weight of aggregate passing 2.36 mm sieve after the test = W_2 g	83.5	84.5	
3	Weight of aggregate retained 2.36 mm sieve after the test = W_3 g	297.5	295.8	
4	Aggregate Impact value = percent fines 100* (W_2/W_1) percent	21.92	22.18	**22.05**

Comments:

→ Maximum allowable Aggregate Impact value for Bituminous Concrete is 24%

Note: 1) The results indicated above are based on the tests carried out on the samples received in the laboratory.

2)Any Query regarding the report must be reported immediately.

RBI -Technical Services
(CONSULTANT)
For RBI-TECHNICAL SERVICES

Proprietor

Assistant Engineer

Assistant Executive Engineer
Kodigehalli Sub Division,
Yelahanka Zone, B.B.M.P.
Bangalore.

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ISO 9001 - 2015 Certified

Job No:RBITS/MT/BBMP-BD/2017-18/001 **Date:30.04.2018**

TEST REPORT

Client	:	**Executive Engineer,** **Byatarayanapura Division, BBMP.**
Name of the work	:	Improvements to Roads, Drains and Drilling Borwells in ward no. 07 & 08 of Kodigehalli Sub-Division of Byatarayanapura Division, under P3106 Nagarathana works.
Source of Sample	:	Hot Mix plant
Date of Testing	:	29.04.2018

The results of the tests conducted on the **CRMB 55** sample using for Bituminous Concrete collected from the contractor's plant are as follows:

Sl.No	Description	Test Result	Requirement as per IS:15462:2004 for CRMB 55
1	Penetration at 25^0c, 1/10 mm,100g.5s	53	< 60
2	Softening point, ^{0}c	57	Min. 55
3	Flash Point, ^{0}c	235	Min. 220

⇒ *The results indicated above are based on the tests carried out on the samples received in the laboratory.*

⇒ *Any Query regarding the report must be reported immediately.*

RBI -Technical Services

Assistant Engineer

Assistant Executive Engineer

Assistant Executive Engineer
Kodigehalli Sub Division,
Yelahanka Zone, B.B.M.P.
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For RBI-TECHNICAL SERVICES

Proprietor

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Cell : 9448352709 Email : rbitc2@gmail.com

Job No:RBITS/MT/BBMP-BD/2017-18/002

Date:30.04.2018

Aggregate Shape Test

IS: 2386 Part I

Client	**Executive Engineer, Byatarayanapura Division, BBMP.**
Name of the Work	Improvements to Roads, Drains and Drilling Borwells in ward no. 07 & 08 of Kodigehalli Sub-Division of Byatarayanapura Division, under P3106 Nagarathana works.
Type of Mix	**Bituminous Concrete**
Source of Sample	Hot Mix Plant
Date of Testing	**29.04.2018**

Size of Aggregates		Weight of Fraction consisting of atleast 200 pieces, g		Thickness guage size, mm	Weight of aggregate in each fraction passing thickness guage, g		Length guage size, mm	Weight of aggregate in each fraction retained on length guage, g	
Passing through IS sieve, mm	Retained on IS sieve, mm								
63	50	W_1	0	23.9	w_1	0	--	x_1	0
50	40	W_2	0	27	w_2	0	81	x_2	0
40	25	W_3	0	19.5	w_3	0	58	x_3	0
31.5	25	W_4	0	16.95	w_4	0	--	x_4	0
25	20	W_5	0	13.5	w_5	0	40.5	x_5	0
20	16	W_6	2450	10.8	w_6	197	32.4	x_6	187
16	12.5	W_7	1785	8.55	w_7	135	25.5	x_7	157
12.5	10	W_8	1150	6.75	w_8	184	20.2	x_8	100
10	6.3	W_9	205	4.89	w_9	18	14.7	x_9	27

Flakiness Index 9.55%

Elongation Index 8.43%

Combined Flakiness & Elongation Index 17.98%

Comments:

→ Maximum allowable Combined Flakiness and Elongation Index for Bituminous Concrete is 30%

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(CONSULTANT)
Proprietor

Assistant Engineer

Assistant Executive Engineer
Assistant Executive Engineer
Kodigehalli Sub Division,
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Bangalore.

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BITUMEN CONTENT DETERMINATION OF BITUMINOUS MIX

CLIENT	**Executive Engineer,** **Byatarayanapura Division, BBMP.**
NAME OF THE WORK	Improvements to Roads, Drains and Drilling Borwells in ward no. 07 & 08 of Kodigehalli Sub-Division of Byatarayanapura Division, under P3106 Nagarathana works.
AGENCY	Sri. G.N Ramesh
TYPE OF MIX	Bituminous Concrete
DATE OF TESTING	**08.05.2018**

Vehicle no:

Description	Trail 1	Trail 2
1. Weight of Bitumen mix taken before extraction (W1) gms	500	500
2. Weight of Bitumen mix taken after extraction (W2) gms	471	469
Difference in weight after extraction (W3) gms= (W1-W2)	29.00	31.00
4. Percentage of bitumen in mix = (W3/W1)* 100 (%)	5.80	6.20
5. Average in %	**6.00**	

For RBI - Technical Services

Site Engineer

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BITUMEN CONTENT DETERMINATION OF BITUMINOUS MIX

CLIENT	**Executive Engineer,** **Byatarayanapura Division, BBMP.**
NAME OF THE WORK	Improvements to Roads, Drains and Drilling Borwells in ward no. 07 & 08 of Kodigehalli Sub-Division of Byatarayanapura Division, under P3106 Nagarathana works.
AGENCY	Sri. G.N Ramesh
TYPE OF MIX	Bituminous Concrete
DATE OF TESTING	**08.05.2018**

Vehicle no:

Description	Trail 1	Trail 2
1. Weight of Bitumen mix taken before extraction (W1) gms	500	500
2. Weight of Bitumen mix taken after extraction (W2) gms	470.5	469
Difference in weight after extraction (W3) gms= (W1-W2)	29.50	31.00
4. Percentage of bitumen in mix = (W3/W1)* 100 (%)	5.90	6.20
5. Average in %	**6.05**	

For RBI - Technical Services

Site Engineer

BITUMEN CONTENT DETERMINATION OF BITUMINOUS MIX

CLIENT	**Executive Engineer,** **Byatarayanapura Division, BBMP.**
NAME OF THE WORK	Improvements to Roads, Drains and Drilling Borwells in ward no. 07 & 08 of Kodigehalli Sub-Division of Byatarayanapura Division, under P3106 Nagarathana works.
AGENCY	Sri. G.N Ramesh
TYPE OF MIX	Bituminous Concrete
DATE OF TESTING	**08.05.2018**

Vehicle no:

Description	Trail 1	Trail 2
1. Weight of Bitumen mix taken before extraction (W1) gms	500	500
2. Weight of Bitumen mix taken after extraction (W2) gms	470	469
Difference in weight after extraction (W3) gms= (W1-W2)	30.00	31.00
4. Percentage of bitumen in mix = (W3/W1)* 100 (%)	6.00	6.20
5. Average in %	**6.10**	

For RBI - Technical Services

Site Engineer

BITUMEN CONTENT DETERMINATION OF BITUMINOUS MIX

CLIENT	**Executive Engineer,** **Byatarayanapura Division, BBMP.**
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2. Weight of Bitumen mix taken after extraction (W2) gms	469.5	469
Difference in weight after extraction (W3) gms= (W1-W2)	30.50	31.00
4. Percentage of bitumen in mix = (W3/W1)* 100 (%)	6.10	6.20
5. Average in %	**6.15**	

For RBI - Technical Services

Site Engineer

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BITUMEN CONTENT DETERMINATION OF BITUMINOUS MIX

CLIENT	**Executive Engineer,** **Byatarayanapura Division, BBMP.**
NAME OF THE WORK	Improvements to Roads, Drains and Drilling Borwells in ward no. 07 & 08 of Kodigehalli Sub-Division of Byatarayanapura Division, under P3106 Nagarathana works.
AGENCY	Sri. G.N Ramesh
TYPE OF MIX	Bituminous Concrete
DATE OF TESTING	**08.05.2018**

Vehicle no:

Description	Trail 1	Trail 2
1. Weight of Bitumen mix taken before extraction (W1) gms	500	500
2. Weight of Bitumen mix taken after extraction (W2) gms	470	470
Difference in weight after extraction (W3) gms= (W1-W2)	30.00	30.00
4. Percentage of bitumen in mix = (W3/W1)* 100 (%)	6.00	6.00
5. Average in %	**6.00**	

For RBI - Technical Services

Site Engineer

BITUMEN CONTENT DETERMINATION OF BITUMINOUS MIX

CLIENT	**Executive Engineer,** **Byatarayanapura Division, BBMP.**
NAME OF THE WORK	Improvements to Roads, Drains and Drilling Borwells in ward no. 07 & 08 of Kodigehalli Sub-Division of Byatarayanapura Division, under P3106 Nagarathana works.
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5. Average in %	**6.00**	

For RBI - Technical Services

Site Engineer

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4. Percentage of bitumen in mix = (W3/W1)* 100 (%)	6.00	6.20
5. Average in %	**6.10**	

For RBI - Technical Services

Site Engineer

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BITUMEN CONTENT DETERMINATION OF BITUMINOUS MIX

CLIENT	**Executive Engineer,** **Byatarayanapura Division, BBMP.**
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Difference in weight after extraction (W3) gms= (W1-W2)	30.00	31.00
4. Percentage of bitumen in mix = (W3/W1)* 100 (%)	6.00	6.20
5. Average in %	**6.10**	

For RBI - Technical Services

Site Engineer

NDP
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BITUMEN CONTENT DETERMINATION OF BITUMINOUS MIX

CLIENT	**Executive Engineer,** **Byatarayanapura Division, BBMP.**
NAME OF THE WORK	Improvements to Roads, Drains and Drilling Borwells in ward no. 07 & 08 of Kodigehalli Sub-Division of Byatarayanapura Division, under P3106 Nagarathana works.
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4. Percentage of bitumen in mix = (W3/W1)* 100 (%)	6.00	6.00
5. Average in %	**6.00**	

For RBI - Technical Services

Site Engineer

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